Amendments to the Claims:

A clean version of the entire set of pending claims, including amendments to the claims, is submitted herewith per 37 CFR 1.121(c)(3). This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of segmenting a three-dimensional structure from a three-dimensional~~, and in particular medical,~~ data set while making allowance for user corrections, having the following steps:

a) provision of a three-dimensional deformable model (M) whose surface is formed by a network of mashes that connect nodes at the surface of the model,

b) positioning of the model (M) at a point in a three-dimensional data set at which the structure (6) to be segmented is situated,

c) manual displacement of nodes,

d) re-calculation of the nodes of the model (M) in weighted consideration of the nodes that have been displaced manually.

2. (Original) A method as claimed in claim 1, wherein step d) comprises the following steps:

determination of a candidate point for each sub-surface defined by mashes of the model, each candidate point being situated on a normal to the sub-surface,

assignment of a weighting factor to each node that has been displaced, the weighting factor being larger the smaller distance between the displaced node and a boundary surface of the structure to be segmented,

re-calculation of the nodes of the model while allowing for the candidate points determined, the displaced nodes, and the weighting factors assigned.

3. (Original) A method as claimed in claim 1, characterized in that step d) the nodes are re-calculated by minimizing a weighted sum of external energy, internal energy and an energy that takes into account the manually displaced nodes.

4. (Original) An image-processing arrangement for performing the method claimed in claim 1, comprising:

a memory unit for storing a deformable model whose surface is formed by a network of mashes that connect the nodes at the surface of the model, and for storing a three-dimensional data set and in particular a medical data set,

an image-reproduction unit for reproducing a structure to be segmented and the deformable model,

a calculating unit for re-calculating the nodes of the model in weighted consideration of nodes which have been displaced manually,

a positioning unit for positioning the model at the point in the three-dimensional data set at which the structure to be segmented is situated,

a control unit for controlling the memory unit, the image-reproduction unit, the calculating unit and the positioning unit to perform the following steps:

a) provision of a three-dimensional deformable model (M) whose surface is formed by a network of mashes that connect nodes at the surface of the model,

b) positioning of the model (M) at a point in a three-dimensional data set at which the structure (6) to be segmented is situated,

c) manual displacement of nodes,

d) re-calculation of the nodes of the model (M) in weighted consideration of the nodes that have been displaced manually.

5. (Currently Amendment) A computer readable medium encoded with a computer program executable by ~~for~~ a control unit of an image processing arrangement for controlling a memory unit, an image-reproduction unit, a calculating unit and a positioning unit of an image-processing arrangement, ~~wherein the program is embedded in a computer-readable medium, for controlling the image-processing~~

~~arrangement as claimed in Claim 4~~ to perform a method according to the following steps:

a) provision of a three-dimensional deformable model (M) whose surface is formed by a network of mashes that connect nodes at the surface of the model,

b) positioning of the model (M) at a point in a three-dimensional data set at which the structure (6) to be segmented is situated,

c) manual displacement of nodes,

d) re-calculation of the nodes of the model (M) in weighted consideration of the nodes that have been displaced manually.

6. (New) The method of claim 1, wherein the model (M) includes a plurality of masks of defined shape, and wherein re-calculation of the nodes of the model (M) includes for each of the plurality of masks determining a candidate point situated on a normal to the mask.

7. (New) The method of claim 6, wherein re-calculation of the nodes of the model (M) further includes minimizing an energy function that includes a weighted sum of: (1) an external energy that moves the masks in a direction toward the candidate points; (2) an internal energy that acts to oppose any deformation of the model: and (3) an energy that causes the model to deform in directions toward the nodes that are manually displaced in step c).

8. (New) The arrangement of claim 4, wherein the control unit controls the memory unit, the image-reproduction unit, the calculating unit and the positioning unit to perform step d) by:

determination of a candidate point for each sub-surface defined by mashes of the model, each candidate point being situated on a normal to the sub-surface,

assignment of a weighting factor to each node that has been displaced, the weighting factor being larger the smaller distance between the displaced node and a boundary surface of the structure to be segmented,

re-calculation of the nodes of the model while allowing for the candidate points determined, the displaced nodes, and the weighting factors assigned.

9. (New) The arrangement of claim 4, wherein the control unit controls the memory unit, the image-reproduction unit, the calculating unit and the positioning unit to perform step d) by minimizing a weighted sum of external energy, internal energy and an energy that takes into account the manually displaced nodes.

10. (New) The arrangement of claim 4, wherein the model (M) includes a plurality of masks of defined shape, and wherein re-calculation of the nodes of the model (M) includes for each of the plurality of masks determining a candidate point situated on a normal to the mask.

11. (New) The arrangement of claim 10, wherein re-calculation of the nodes of the model (M) further includes minimizing an energy function that includes a weighted sum of: (1) an external energy that moves the masks in a direction toward the candidate points; (2) an internal energy that acts to oppose any deformation of the model: and (3) an energy that causes the model to deform in directions toward the nodes that are manually displaced in step c).

12. (New) The computer readable medium of claim 5, wherein the computer program causes the control unit to control the memory unit, the image-reproduction unit, the calculating unit and the positioning unit to perform step d) by:

determination of a candidate point for each sub-surface defined by mashes of the model, each candidate point being situated on a normal to the sub-surface,

assignment of a weighting factor to each node that has been displaced, the weighting factor being larger the smaller distance between the displaced node and a boundary surface of the structure to be segmented,

re-calculation of the nodes of the model while allowing for the candidate points determined, the displaced nodes, and the weighting factors assigned.

13. (New) The computer readable medium of claim 5, wherein the computer program causes the control unit to control the memory unit, the image-reproduction unit, the calculating unit and the positioning unit to perform step d) by minimizing a weighted sum of external energy, internal energy and an energy that takes into account the manually displaced nodes.

14. (New) The computer readable medium of claim 5, wherein the model (M) includes a plurality of masks of defined shape, and wherein the computer program causes the control unit to control the memory unit, the image-reproduction unit, the calculating unit and the positioning unit to re-calculate of the nodes of the model (M) by determining, for each of the plurality of masks, a candidate point situated on a normal to the mask.

15. (New) The computer readable medium of claim 14, wherein the computer program further causes the control unit to control the memory unit, the image-reproduction unit, the calculating unit and the positioning unit to re-calculate of the nodes of the model (M) by minimizing an energy function that includes a weighted sum of: (1) an external energy that moves the masks in a direction toward the candidate points; (2) an internal energy that acts to oppose any deformation of the model: and (3) an energy that causes the model to deform in directions toward the nodes that are manually displaced in step c).